BEFORE THE STATE OF WASHINGTON

ENERGY FACILITY SITE EVAUATION COUNCIL

In the Matter of Application No. 2004-01: WIND RIDGE POWER PARTNERS, LLC; WILD HORSE WIND POWER PROJECT	EXHIBIT 29 (EL-T)

APPLICANT'S PREFILED DIRECT TESTIMONY
WITNESS # 10 : ELIZABETH LACK

Q Please state your name and business address.

A My name is Elizabeth Lack and my business address is 2003 Central Ave, Cheyenne, WY 82001.

Q What is your present occupation, profession; and what are your duties and responsibilities?

A I am employed by Western EcoSystems Technology Inc (WEST). WEST provides environmental and statistical consulting services and contract research nationally and internationally to industry, government, and private organizations such as Zilkha Renewable Energy. We assist those organizations in analyzing environmental impacts of projects such

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as the Wild Horse Wind Power Project ('Project'). I am a botanist for WEST. My duties regarding this Project were to map and describe vegetation in the project area, evaluate sagebrush habitat, search for rare plants, delineate wetlands, note the occurrence of noxious weeds, and evaluate the mitigation parcel. I assisted in the preparation of the Application for Site Certification for this Project.

Q Would you please identify what has been marked for identification as Exhibit 29-1 (EL-1).

A Exhibit 29-1 (EL-1) is a résumé of my educational background and employment experience.

Q Are you sponsoring any portions of the Application for Site Certification for the Wild Horse Wind Power Project?

A Yes. I am sponsoring the following sections for which I was primarily responsible for the analysis and development:

Section 1.6.2 Summary, Cumulative Impacts, Vegetation, Wetlands, Wildlife and Fisheries (Vegetation and Wetland portions)

Section 3.4 Vegetation and Wetlands

Section 3.17.6 Cumulative Impacts, Vegetation, Wetlands, Wildlife and Fisheries (Vegetation and Wetland portions)

Q What exhibits that are part of the Application that you are sponsoring?

A I am sponsoring the following exhibits to the Application:

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Exhibit 12 Habitat Characterization and Rare Plant Resources Report

Q Are you familiar with these sections of the Application and exhibit?

A Yes

Q Did you prepare these sections and exhibit, or, if not, did you direct and /or supervise their preparation?

A Yes.

Q Is the information in these sections and exhibit within your area of authority and /or expertise?

A Yes

Q Are the contents of these sections and exhibit of the Application either based upon your own knowledge, or upon evidence, such as studies and reports as a reasonably prudent persons in your field and expertise are accustomed to rely in the conduct of their affairs?

A Yes.

Q To the best of your knowledge, are the contents of these sections and exhibit of the Application true?

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A Yes.

Q Do you incorporate the facts and content of these sections and exhibit as part of your testimony?

A Yes.

Q Are you able to answer questions under cross examination regarding these sections and exhibit?

A Yes

Q Do you sponsor the admission into evidence of these sections and exhibits of the Application?

A Yes

Q Are there any modifications, corrections or additional information to be made to those portions of the Application that you are sponsoring?

A There have been some minor modifications to some facility layouts since I prepared my report, specifically the quarry and batch plant, temporary laydown areas, major improvement roads, new roads, minor improvement roads, and the feeder line. These modifications resulted in an

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increase in the permanent impacts to vegetation from 148 acres to 165 acres and an increase in temporary impacts to vegetation from 323 acres to 356 acres. The modified impact acreages were addressed in the Environmental Impact Statement for the project.

In the report I prepared, I mapped areas dominated by herbaceous species with little or no shrub cover as "herbaceous". The Washington Department of Fish and Wildlife has since said they consider these areas as shrub-steppe.

Q Would you please summarize and briefly describe the studies you conducted regarding wildlife, your assessment of the impacts of the project on habitat and wildlife, and mitigation features that are being proposed.

A I conducted the following tasks: mapped and described vegetation in the project area, evaluated habitat, searched for rare plants, delineated wetlands, noted occurrences of noxious weeds, and evaluated the proposed mitigation parcel.

The first portion of my work consisted of mapping and describing existing habitat types within the Project area. For this part of the project, the "project area" consisted of the 8,500-acre main area to be leased or purchased for the project and two proposed transmission feeder line routes (BPA and PSE) with a 50-meter buffer on either side of the proposed feeder line. I began by reviewing literature on vegetative communities of eastern Washington. Then I focused in on the project area by creating a preliminary habitat type map using black and white digital aerial photography with the project area outlined using Geographic Information System. I then field-verified the map in late April

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– early May 2003 by driving the roads in and around the project area to correlate habitat types with the photo signature (e.g. color, shading, texture) and visiting representative areas on-site. Due to the scale of the aerial photos used, fine-scale intermingling in transition areas and small inclusions of one habitat type within another are not shown.

The final habitat type map includes 8,500 acres of land and contains nine different major cover types. The majority of the project area is shrub-steppe, accounting for 92% of the main project area and 91% of the feeder line routes.

Lithosolic (shallow-soiled) habitats were found to be present as small inclusions in the shrub-steppe and herbaceous habitat types. Lithosols were typically associated with exposed ridge tops and knolls and dominated by sparse, low-growing stiff sagebrush or Sandberg bluegrass. When stiff sagebrush was dominant, the lithosol was included in the shrub-steppe habitat type, sub-type "sparse" (i.e., less than 30 percent shrub cover). When Sandberg bluegrass was dominant, the lithosol was included in the herbaceous habitat type.

Some concern has been raised regarding the significance of Project lithosol impacts. While the project would disturb some lithosol on-site, the total extent of lithosolic types in the local vicinity and in the region is not known with precision. The regional extent of lithosol habitats in the Columbia Basin is difficult to estimate. Small-scale vegetation and soils maps typically do not break out lithosol sites. However, observational evidence suggests that lithosol habitats are common in the general Project vicinity. This would

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suggest that the lithosol acres to be impacted by the Project likely represent only a small and regionally insignificant proportion of the total lithosol habitat in the vicinity.

In accordance with guidelines developed by WDFW (August 2003) for baseline and monitoring studies for wind projects, I conducted an assessment of shrub-steppe habitat quality during late April – early May 2003. The guidelines state that "where a wind project will affect [shrub-steppe] habitat in "excellent" condition (based on federal methodologies for assessing range land), wind project developers will engage in additional consultation with WDFW regarding suitable mitigation requirements for such habitat". In order to meet the requirements for determining shrub-steppe habitat in "excellent" condition using federal methodologies, I contacted a botanist with the BLM who specializes in shrub-steppe habitat. This botanist suggested using Natural Resource Conservation Service (NRCS) "Range Condition Classes", which classify range condition as "excellent", "good", "fair", or "poor", based on a comparison of the existing community composition to the climax community composition.

I used the 'Releve' method to document the existing community composition. Sample points were taken at each turbine string. A data sheet was filled out at a sample location judged to be most representative of the habitat for each turbine string. Existing plant species were listed at each sample location. Climax community composition data was obtained from the NRCS. Comparison of the existing community composition to the climax community composition allows an assessment of habitat quality. Based on NRCS guidelines, rangeland with 75 to 100 percent of its climax vegetation was classified as "excellent" condition. Rangeland with 50 to 75 percent of its climax vegetation was

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classified as "good" condition. Rangeland with 25 to 50 percent of its climax vegetation was classified as "fair" condition, and less than 25 percent as "poor" condition. Based on this assessment, habitat quality in the main Project area ranges from "fair" to "good", with the majority (72%) rated as "good" and 28% rated as "fair".

I expect that the mitigation measures proposed by the Applicant to minimize the degree and extent of ground disturbance will be effective at reducing both permanent and temporary impacts to vegetation resources. In addition, as mitigation for unavoidable temporary and permanent habitat impacts, the Applicant proposes the acquisition and enhancement of an approximately 600-acre on-site parcel of land. This site meets mitigations requirements outlined in the WDFW Wind Power Guidelines. Furthermore, the Applicant has committed to weed control measures to minimize the introduction and spread of noxious weeds.

The rare plant portion of my work involved searching for special status plant species in the Project area. I addressed all plant taxa defined as 'Endangered', 'Threatened', 'Proposed' or 'Candidate' by the US Fish and Wildlife Service, as well as plants defined as 'Endangered', 'Threatened', 'Sensitive', 'Review', or 'Extirpated' by the Washington Natural Heritage Program. I gathered data about known occurrences of rare plants in or near the Project area. The survey area for rare plant species included all lands that would be occupied by proposed Project facilities and a 50-meter buffer. This included the purposed turbine strings, underground and overhead electrical lines, access roads, staging areas, substation sites, potential quarry sites, and the two proposed feeder line routes (BPA and PSE). A GPS unit was used for navigation. I conducted the survey in early

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spring 2003, with follow-up visits in July, September, and October to search areas that were added or modified. I conducted a meander pedestrian survey, zigzagging back and forth across the survey corridor. During the survey, I kept a list of vascular plants encountered.

No federally-listed 'Endangered', 'Threatened', 'Proposed' or 'Candidate' plant species were found, nor were any Washington state-listed 'Endangered', 'Threatened', or 'Sensitive' plant species found in the survey area. One Washington State 'Review' plant species was found, the hedgehog cactus (*Pediocactus simpsonii*). This species was found scattered in lithosolic habitats throughout the Project area. Some individuals could be impacted by the Project, but the potential loss of a few individuals is not expected to be significant. Suitable habitat (lithosol) is relatively common in the general vicinity of the Project area, where individuals are likely to be found, and the Washington Natural Heritage Program database shows three other known populations within approximately five miles of the Project area. The 'Review' designation carries no legal requirement for protection.

The wetland portion of my work consisted of surveying all lands that would be occupied by proposed Project facilities and a 50-meter buffer for the presence of wetlands, and where found, delineating the wetlands in accordance with the U.S. Army Corps of Engineers guidelines. The survey area was searched on-foot as part of the rare plant survey and no wetlands were found. Several springs are located near the survey area (within approximately 1/8 to 1/2 mile) and these areas were visited to ensure the Project would not affect any wetlands that may be associated with the springs. The proposed

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BPA feeder line crosses Parke Creek, an intermittent stream, east of the main Project area. The crossing location was investigated and no wetlands are associated with Parke Creek at this location. No heavy construction work will take place within 200ft of the creek.

The noxious weed portion of my work consisted of noting the presence of noxious weeds in the Project area (i.e., all lands that would be occupied by proposed project facilities and a 50-meter buffer) and any areas of infestation. Knapweed and Canada thistle were observed and are on the Kittitas County Noxious Weed list, but these species were not common in the Project area. When found, they were associated with areas of previous disturbance such as the oil and gas exploration site on top of Whiskey Dick peak, along roads, and around livestock watering areas. The Project area is dominated by native species with relatively few weedy species.

The final portion of my work involved the evaluation of the vegetation and habitat conditions within the 600-acre mitigation parcel. The parcel is T18N, R21E, Section 27, except for the portion of this section that will be developed as part of the Project; String 'L' follows a ridgeline that dissects Section 27 from north to south. A walk-through was conducted on this parcel and notes were made regarding habitat types present, a species list, and general condition of habitat.

Section 27 provides opportunity for "like-kind" replacement habitat of equal or higher habitat value than the impacted area and it occurs in the same geographical region as the impacted habitat. Consistent with WDFW's guidelines, permanent impacts to habitat

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would be replaced at a ratio equal to or greater than 1:1 for grassland and 2:1 for shrub-steppe. The Applicant is proposing to fence this parcel to eliminate livestock grazing if necessary (i.e. if grazing continues on adjacent parcels), but will using fencing that will allow game species to cross.

Additional benefits of Section 27 as a mitigation parcel for the Project include:

- Protection of a segment of Whiskey Dick Creek
- Continuity of habitat with adjacent state lands
- Preservation of a diversity of habitats

Use of Section 27 as a mitigation parcel would result in protection of an approximately 1-mile segment of Whiskey Dick Creek near its headwaters. Protection of waterways and their adjacent riparian habitat provide significant benefits above and beyond replacement of "like-kind" habitat at agreed upon ratios. Protection of this segment of Whiskey Dick Creek provides benefits for water quality, wildlife, and species diversity. In addition, Section 27 is adjacent to state-owned lands. WDNR administers Section 34 to the south and WDFW administers Section 26 to the east. Use of Section 27 for mitigation will provide continuity of habitat with these adjacent state-owned sections. Finally, a variety of habitat types that occur in the general Project area are found in Section 27, so a diversity of habitat types would be preserved. These include shrub-steppe (moderate and dense), herbaceous, herbaceous/rock outcrop, and woody riparian.

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